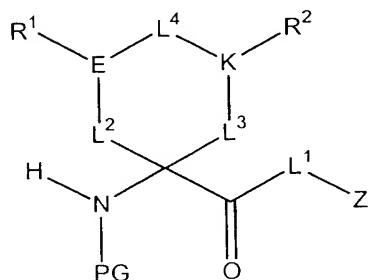


CLAIMS

I claim:

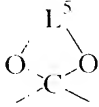
- 5 1. The compound of the following formula



wherein

Z comprises the residue of a solid polymer support;

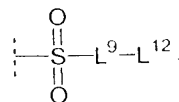
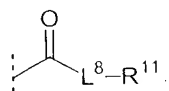
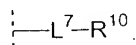
L¹ comprises a divalent group of the formula -O-, -NH-, -O-CH₂-C₆H₄-CH₂O-;L² and L³ comprise, independently, alkylene, alkenylene, alkynylene, or a direct single bond;

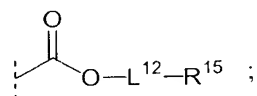
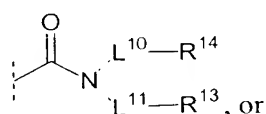
L₄ comprises alkylene, -O-, -S-, -C(O)-, -S(O)-, -S(O)₂-, , or a direct single or double bond;

L⁵ comprises -CH₂CH₂- or -CH₂CH₂CH₂-;

E and K comprise, independently, -N-, -CH-, or -C=;

PG comprises hydrogen or an amino protecting group;

R¹ and R² comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, -O-G³, -O-G⁴, -G³, -G⁴, or -N(G³)G⁴;R¹ and R² may be taken together to constitute a cycloalkyl or heterocyclyl ring, or, where L⁴ is a direct bond, R¹ and R² may be taken together to constitute a fused aryl or heteroaryl ring;G³ and G⁴ comprise, independently,



where

$\text{L}^7, \text{L}^8, \text{L}^9, \text{L}^{10}, \text{L}^{11}, \text{L}^{12}$ comprise, independently, alkylene, alkenylene, alkynylene,

5 cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclarylene, fused heterocyclheteroarylene, or a direct bond; and

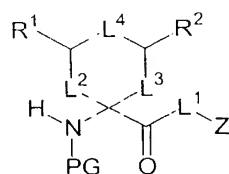
$\text{R}^{10}, \text{R}^{11}, \text{R}^{12}, \text{R}^{13}, \text{R}^{14}, \text{R}^{15}$ comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocycl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclaryl, fused heterocyclheteroaryl, $-\text{NR}^{18}\text{R}^{19}$, $-\text{OR}^{18}$, $-\text{SR}^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocycl, or heteroaryl.

2. The compound of claim 1, wherein the groups $\text{L}^2, \text{L}^3, \text{L}^4, \text{E}$, and K comprise a ring with 3 to 8 members.

3. The compound of claim 2, wherein PG is selected from the group consisting of t -butoxycarbonyl, 9-fluorenylmethoxycarbonyl, and benzyloxycarbonyl.

4. The compound of claim 2, wherein E and K are $-\text{CH}_2-$, represented by the formula



and wherein,

L^2 and L^3 comprise, independently, $-\text{CH}_2-$, $-\text{CH}_2\text{CH}_2-$, or a direct single bond;

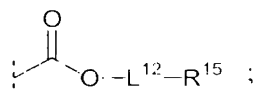
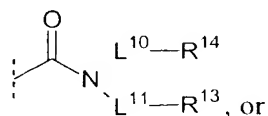
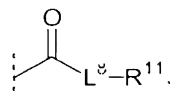
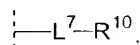
L^4 comprises $-\text{CH}_2-$, $-\text{C}(\text{O})-$, $\begin{array}{c} \text{L}^5 \\ \diagup \quad \diagdown \\ \text{O} \quad \text{C} \quad \text{O} \end{array}$, or a direct single bond;

L^5 comprises $-\text{CH}_2\text{CH}_2-$ or $-\text{CH}_2\text{CH}_2\text{CH}_2-$;

R^1 and R^2 comprises, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocycl, aryl, heteroaryl, hydrogen, halo, $-\text{O}-\text{G}^3$, $-\text{O}-\text{G}^4$, $-\text{G}^3$, $-\text{G}^4$, or $-\text{N}(\text{G}^3)\text{G}^4$;

R^1 and R^2 may be taken together to constitute a cycloalkyl or heterocyclyl ring;

G^3 and G^4 comprise, independently,



where

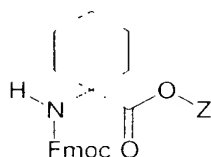
$L^7, L^8, L^{10}, L^{11}, L^{12}$ comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

$R^{10}, R^{11}, R^{13}, R^{14}, R^{15}$ comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-NR^{18}R^{19}$, $-OR^{18}$, $-SR^{18}$, or hydrogen,

where R^{18} and R^{19} are as defined below;

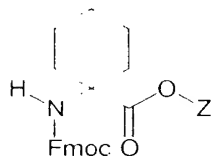
R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

5. The compound of claim 4 of the formula



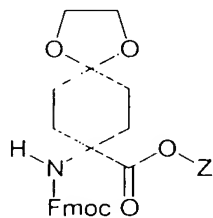
wherein Z comprises the Wang resin.

6. The compound of claim 4 of the formula



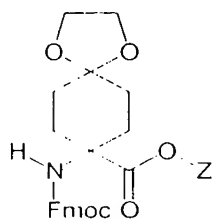
wherein Z comprises the Merrifield resin.

7. The compound of claim 4 of the formula



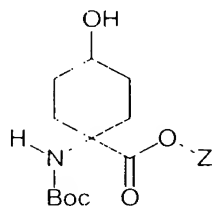
wherein Z comprises the Wang resin.

8. The compound of claim 4 of the formula



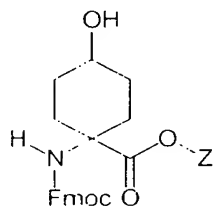
wherein Z comprises the Merrifield resin.

9. The compound of claim 4 of the formula



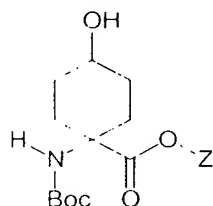
wherein Z comprises the Wang resin.

10. The compound of claim 4 of the formula



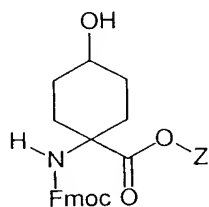
wherein Z comprises the Wang resin.

11. The compound of claim 4 of the formula



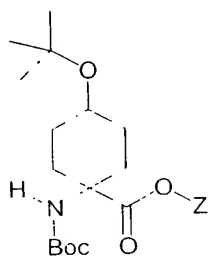
wherein Z comprises the Merrifield resin.

12. The compound of claim 4 of the formula



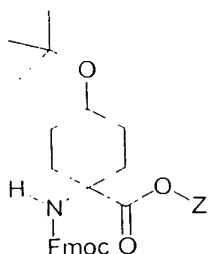
wherein Z comprises the Merrifield resin.

13. The compound of claim 4 of the formula



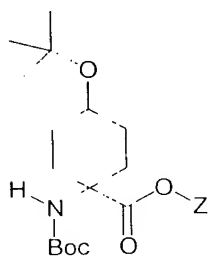
wherein Z comprises the Wang resin.

14. The compound of claim 4 of the formula



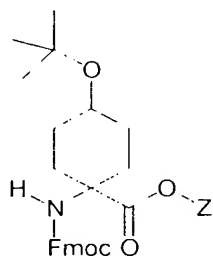
wherein Z comprises the Wang resin.

15. The compound of claim 4 of the formula



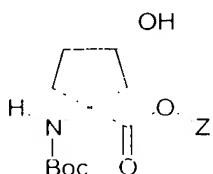
wherein Z comprises the Merrifield resin.

16. The compound of claim 4 of the formula



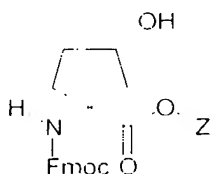
wherein Z comprises the Merrifield resin.

17. The compound of claim 4 of the formula



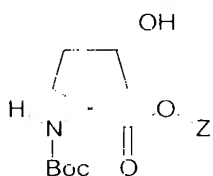
5 wherein Z comprises the Wang resin.

18. The compound of claim 4 of the formula



wherein Z comprises the Wang resin.

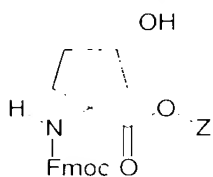
19. The compound of claim 4 of the formula



10

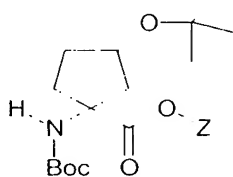
wherein Z comprises the Merrifield resin.

20. The compound of claim 4 of the formula



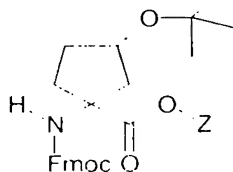
wherein Z comprises the Merrifield resin.

15 21. The compound of claim 4 of the formula



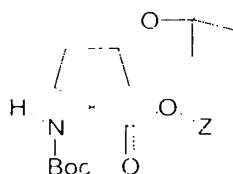
wherein Z comprises the Wang resin.

22 The compound of claim 4 of the formula



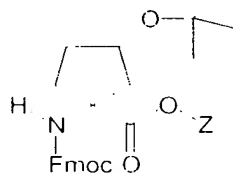
5 wherein Z comprises the Wang resin.

23 The compound of claim 4 of the formula



wherein Z comprises the Merrifield resin.

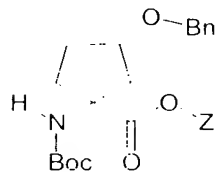
24 The compound of claim 4 of the formula



10

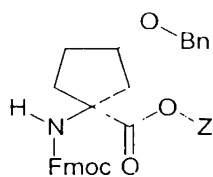
wherein Z comprises the Merrifield resin.

25 The compound of claim 4 of the formula



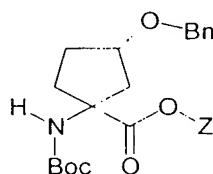
wherein Z comprises the Wang resin.

15 26 The compound of claim 4 of the formula



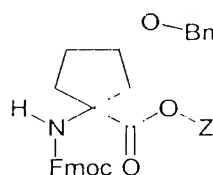
wherein Z comprises the Wang resin.

27. The compound of claim 4 of the formula



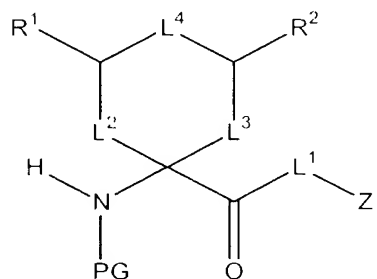
wherein Z comprises the Merrifield resin.

28. The compound of claim 4 of the formula



wherein Z comprises the Merrifield resin.

29. The compound of claim 2, wherein E and K are $-CH_2-$, represented by the formula



and wherein,

L^2 and L^3 comprise, independently, $-CH_2-$, $-CH_2CH_2-$, or a direct single bond;

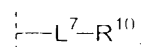
L^4 comprises $-O-$, $-S-$, $-S(O)-$, or $-S(O)_2-$;

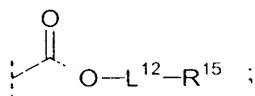
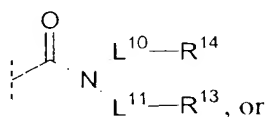
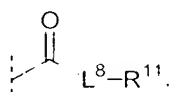
R^1 and R^2 comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl,

heteroaryl, hydrogen, halo, $-O-G^3$, $-O-G^4$, $-G^3$, $-G^4$, or $-N(G^3)G^4$;

R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

G^3 and G^4 comprise, independently,

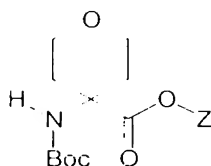




where

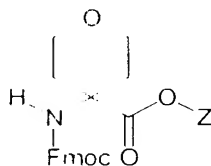
- 5 $\text{L}^7, \text{L}^8, \text{L}^{10}, \text{L}^{11}, \text{L}^{12}$ comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclarylene, fused heterocyclheteroarylene, or a direct bond; and
- 10 $\text{R}^{10}, \text{R}^{11}, \text{R}^{13}, \text{R}^{14}, \text{R}^{15}$ comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocycl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclaryl, fused heterocyclheteroaryl, $\text{---NR}^{18}\text{R}^{19}$, ---OR^{18} , ---SR^{18} , or hydrogen, where R^{18} and R^{19} are as defined below;
- R^{13} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocycl, or heteroaryl.

- 15 30 The compound of claim 29 of the formula



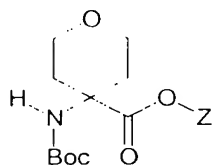
wherein Z comprises the Wang resin.

- 31 The compound of claim 29 of the formula



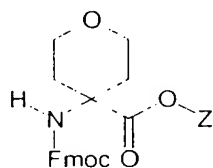
- 20 wherein Z comprises the Wang resin.

- 32 The compound of claim 29 of the formula



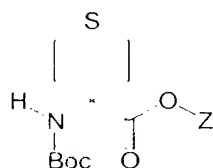
wherein Z comprises the Merrifield resin.

33. The compound of claim 29 of the formula



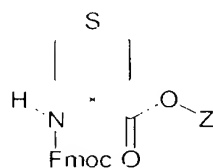
5 wherein Z comprises the Merrifield resin.

34. The compound of claim 29 of the formula



wherein Z comprises the Wang resin.

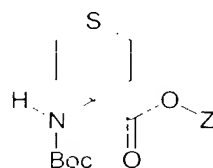
35. The compound of claim 29 of the formula



10

wherein Z comprises the Wang resin.

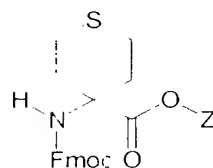
36. The compound of claim 29 of the formula



wherein Z comprises the Merrifield resin.

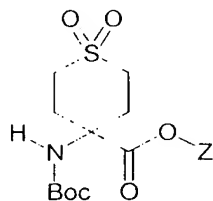
15

37. The compound of claim 29 of the formula



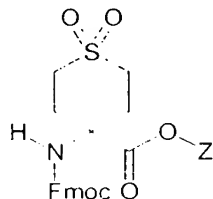
wherein Z comprises the Merrifield resin.

38 The compound of claim 29 of the formula



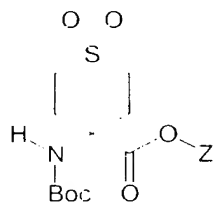
wherein Z comprises the Wang resin.

39 The compound of claim 29 of the formula



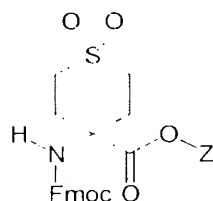
wherein Z comprises the Wang resin.

40 The compound of claim 29 of the formula



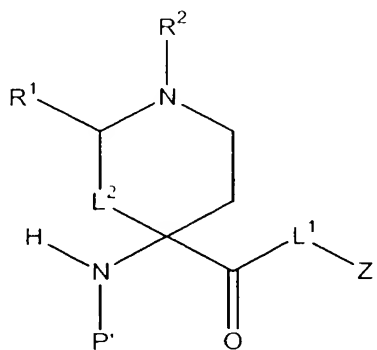
wherein Z comprises the Merrifield resin.

41 The compound of claim 29 of the formula



wherein Z comprises the Merrifield resin.

42. The compound of claim 2, wherein E comprises CH_2 -, K comprises N -, L^3 comprises CH_2CH_2 -, L^4 comprises a direct single bond, represented by the formula



and wherein,

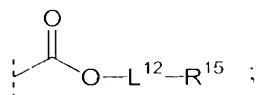
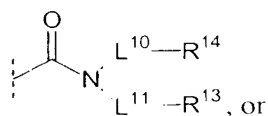
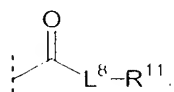
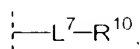
L^2 comprises $-\text{CH}_2-$, $-\text{CH}_2\text{CH}_2-$, or a direct single bond;

R^1 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-\text{O}-\text{G}^3$, $-\text{G}^3$, or $-\text{N}(\text{G}^3)\text{G}^4$;

R^2 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, or $-\text{G}^5$;

R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

G^3 and G^4 comprise, independently,



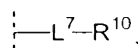
where

L^7 , L^8 , L^{10} , L^{11} , L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclarylene, fused heterocyclheteroarylene, or a direct bond; and

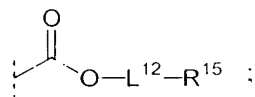
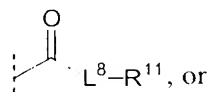
R^{10} , R^{11} , R^{13} , R^{14} , R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclaryl, fused heterocyclheteroaryl, $-\text{NR}^{18}\text{R}^{19}$, $-\text{OR}^{18}$, $-\text{SR}^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below:

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl;

G^5 comprises



5



where

L^7 , L^8 , L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

10

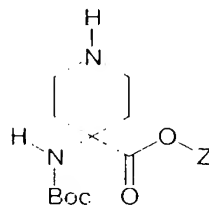
R^{10} , R^{11} , R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-\text{NR}^{18}\text{R}^{19}$, $-\text{OR}^{18}$, $-\text{SR}^{18}$, or hydrogen, where

15

R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

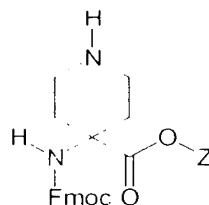
43. The compound of claim 42 of the formula



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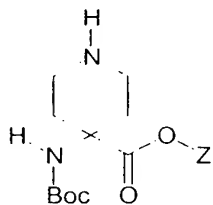
wherein Z comprises the Wang resin.

44. The compound of claim 42 of the formula



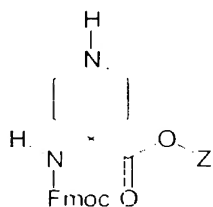
wherein Z comprises the Wang resin.

45. The compound of claim 42 of the formula



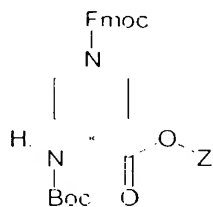
wherein Z comprises the Merrifield resin.

46. The compound of claim 42 of the formula



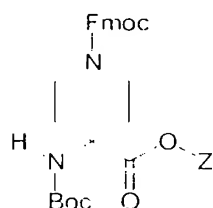
wherein Z comprises the Merrifield resin.

47. The compound of claim 42 of the formula



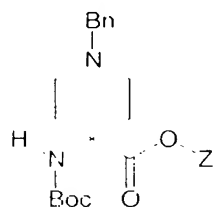
wherein Z comprises the Wang resin.

48. The compound of claim 42 of the formula



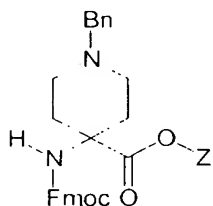
wherein Z comprises the Merrifield resin.

49. The compound of claim 42 of the formula



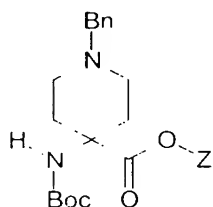
wherein Z comprises the Wang resin.

50. The compound of claim 42 of the formula



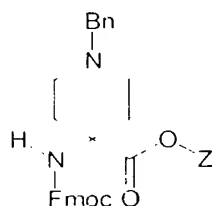
wherein Z comprises the Wang resin.

51. The compound of claim 42 of the formula



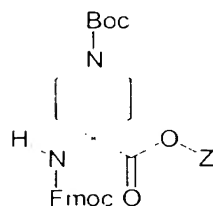
5 wherein Z comprises the Merrifield resin.

52. The compound of claim 42 of the formula



wherein Z comprises the Merrifield resin.

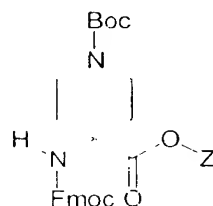
53. The compound of claim 42 of the formula



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wherein Z comprises the Wang resin.

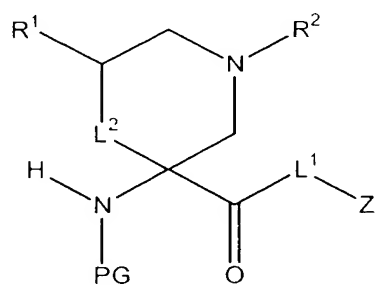
54. The compound of claim 42 of the formula



wherein Z comprises the Merrifield resin.

15

55. The compound of claim 2, wherein E comprises $-CH_2-$, K comprises $-N-$, L^3 comprises $-CH_2-$, L^4 comprises $-CH_2-$, represented by the formula



and wherein,

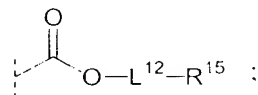
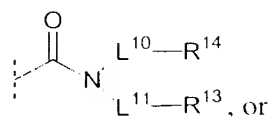
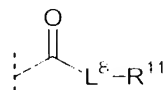
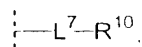
L^2 comprises $-\text{CH}_2-$, $-\text{CH}_2\text{CH}_2-$, or a direct single bond;

- 5 R^1 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, halo, $-\text{O}-G^3$, $-G^3$, or $-\text{N}(G^3)G^4$;

R^2 comprises alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydrogen, or $-G^5$;

R^1 and R^2 may be taken together to constitute a heterocyclyl ring;

- 10 G^3 and G^4 comprise, independently,



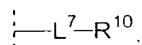
- 15 where

L^7 , L^8 , L^{10} , L^{11} , L^{12} comprise, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

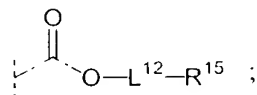
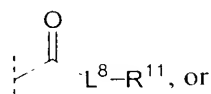
- 20 R^{10} , R^{11} , R^{13} , R^{14} , R^{15} comprise, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-\text{NR}^{18}\text{R}^{19}$, $-\text{OR}^{18}$, $-\text{SR}^{18}$, or hydrogen, where R^{18} and R^{19} are as defined below;

R^{18} and R^{19} comprise, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

G^5 comprises



5



where

L^7, L^8, L^{12} are, independently, alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, arylene, heterocyclylene, heteroarylene, fused cycloalkylarylene, fused cycloalkylheteroarylene, fused heterocyclylarylene, fused heterocyclylheteroarylene, or a direct bond; and

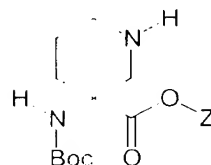
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R^{10}, R^{11}, R^{15} are, independently, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl, heteroaryl, aryl, fused cycloalkylaryl, fused cycloalkylheteroaryl, fused heterocyclylaryl, fused heterocyclylheteroaryl, $-\text{NR}^{18}\text{R}^{19}$, $-\text{OR}^{18}$, $-\text{SR}^{18}$, or hydrogen, where

15

R^{18} and R^{19} are as defined below;
 R^{18} and R^{19} are, independently, hydrogen, alkyl, alkynyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, or heteroaryl.

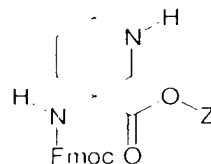
56. The compound of claim 55 of the formula



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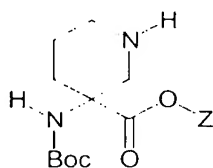
wherein Z comprises the Wang resin.

57. The compound of claim 55 of the formula



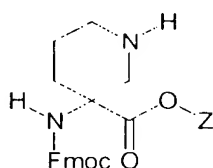
wherein Z comprises the Wang resin.

58. The compound of claim 55 of the formula



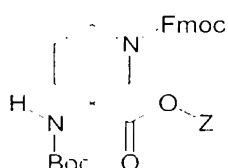
wherein Z comprises the Merrifield resin.

59. The compound of claim 55 of the formula



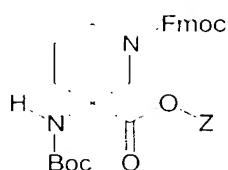
5 wherein Z comprises the Merrifield resin.

60. The compound of claim 55 of the formula



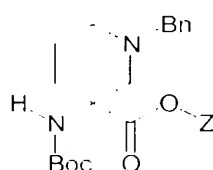
wherein Z comprises the Wang resin.

61. The compound of claim 55 of the formula



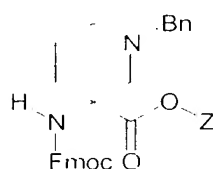
wherein Z comprises the Merrifield resin.

62. The compound of claim 55 of the formula



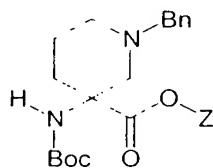
wherein Z comprises the Wang resin.

63. The compound of claim 55 of the formula



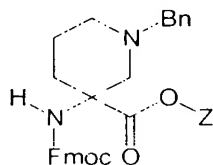
wherein Z comprises the Wang resin.

64. The compound of claim 55 of the formula



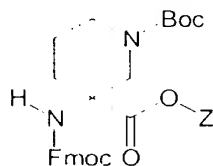
wherein Z comprises the Merrifield resin.

65. The compound of claim 55 of the formula



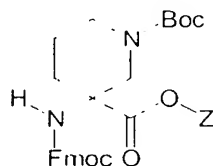
wherein Z comprises the Merrifield resin.

66. The compound of claim 55 of the formula



wherein Z comprises the Wang resin.

67. The compound of claim 55 of the formula



wherein Z comprises the Merrifield resin.